AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listing of claims in the application.

1-22.   (cancelled)

23.   (currently amended) A composition comprising:

(a)   a population of neural cells enriched for neurosphere initiating stem cells (NS-IC) produced by:

(1)   combining a population comprising neural cells or neural-derived cells containing a fraction of NS-ICs with monoclonal antibody AC133 or monoclonal antibody 5E12 (ATCC Accession No. PTA-994); and

(2)   selecting and isolating those cells that bind to monoclonal antibody AC133 or monoclonal antibody 5E12, thereby producing a population of cells enriched for NS-IC as compared with the population of neural cells or neural-derived cells; and

(b)   at least one monoclonal antibody selected from the group consisting of monoclonal antibody AC133 and monoclonal antibody 5E12, wherein the at least one monoclonal antibody is conjugated with a label.

24.-26. (cancelled)

27.   (currently amended) An *in vitro* cell culture composition comprising:

(a)   a population of neural cells enriched in NS-IC, wherein the NS-IC bind to monoclonal antibody AC133 or to monoclonal antibody 5E12 (ATCC Accession No. PTA-994) and are CD45⁻ cells;

(b)   a medium capable of supporting the growth of the cells; and

(c)   at least one monoclonal antibody selected from the group consisting of monoclonal antibody AC133 and monoclonal antibody 5E12 , wherein the at least

one monoclonal antibody is conjugated with a label.

28.   (currently amended) An *in vitro* cell culture composition comprising:

    (a)   a population of neural cells enriched in NS-IC, wherein the NS-IC bind to monoclonal antibody AC133 or to monoclonal antibody 5E12 (ATCC Accession No. PTA-994) and are CD45⁻ CD34⁻cells;

    (b)   a medium capable of supporting the growth of the cells; and

    (c)   at least one monoclonal antibody selected from the group consisting of monoclonal antibody AC133 and monoclonal antibody 5E12, wherein the at least one monoclonal antibody is conjugated with a label.

29.   (currently amended) An *in vitro* cell culture composition comprising:

    (a)   a population of neural cells enriched in NS-IC, wherein the NS-IC bind to monoclonal antibody AC133 or to monoclonal antibody 5E12 (ATCC Accession No. PTA-994) and are CD24⁻ cells;

    (b)   a medium capable of supporting the growth of the cells; and

    (c)   at least one monoclonal antibody selected from the group consisting of monoclonal antibody AC133 and monoclonal antibody 5E12, wherein the at least one monoclonal antibody is conjugated with a label.

30-31. (cancelled)

32.   (previously presented) The composition of any one of claims 23 and 27-29, further comprising a solid support to which the cells are attached.

33.   (previously presented) The composition of any one of claims 23 and 27-29, wherein the population of cells comprises at least 70% cells that bind to monoclonal antibody AC133 or monoclonal antibody 5E12.

34.   (previously presented) The composition of any one of claims 23 and 27-29, wherein the population of cells comprises at least 90% cells that bind to monoclonal antibody AC133 or monoclonal antibody 5E12.

35.   (previously presented) The composition of any one of claims 23 and 27-29, wherein the population of cells that bind to monoclonal antibody AC133 or monoclonal antibody 5E12 is a substantially pure population.

36.   (previously presented) The composition of any one of claims 23 and 27-29, wherein the medium comprises a serum-free medium containing one or more growth factors effective for inducing multipotent neural stem cell proliferation.

37.   (previously presented) The composition of any one of claims 23 and 27-29, wherein the medium comprises a growth factor selected from the group consisting of leukocyte inhibitory factor (LIF), epidermal growth factor (EGF), basic fibroblast growth factor (FGF-2), and combinations thereof.

38.   (previously presented) The composition of any one of claims 23 and 27-29, wherein the medium comprises neural survival factor, NSF.

39.   (previously presented) The composition of any one of claims 23 and 27-29, wherein the neural cells are human.

40.-43. (cancelled)

44.   (new)   The composition of any one of claims 23 and 27-29, wherein the label is selected from the group consisting of magnetic beads, biotin, fluorochromes, and haptens.